

XXVIII. *Descriptions of some new Species of Athyreus, a Genus of Lamellicorn Beetles.* By J. O. WESTWOOD, Esq., F.L.S. &c.

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THE genus *Athyreus* was first proposed by Mr. W. S. MacLeay, in the appendix to the 'Horæ Entomologicæ,' for the reception of three Brazilian species, *A. bifurcatus*, *tridentatus* and *bidentatus*, and was placed in the family *Geotrupidæ*, with the remark (p. 53), that "by way of proof that the *Geotrupidæ* are principally confined to temperate climates, I may observe that the tropical insects of this family principally belong to the extreme genera, such as *Athyreus* and *Hybosorus*, the former of which approaches to the *Scarabæidæ* and the latter to the *Dynastidæ*;" the relation of *Athyreus* to the *Scarabæidæ* being again alluded to in p. 123, in the observation, "Genus admodum singulare, capite neglecto a *Copride* haud distinguendum, sed ab *Elephastomo* quoque haud longè distat."

The characters of the genus as laid down by Mr. MacLeay do not however give a clear idea of its peculiarities; neither are the species, which he has too briefly defined, to be identified with proper precision. The mandibles (TAB. XXII. fig. *a, a*), for instance, instead of being flat on the upper surface are quite concave, the lateral and apical portions not being covered by the labrum; and as each is of a different shape, a single description will not apply to them. I have given a delineation of them in the accompanying figures, and must here only allude to the black, horny, flattened molar plate at the base on the inside, which is destitute of those curious transverse ridges which are seen in the *Melolonthidæ*; this peculiarity being an important one, bearing directly upon the nature of the food of the insects, which is ground by these two hard parts of the mandibles being brought together by the action of the strong muscles inserted near the outer base of the jaws, close to the deep notch which will be seen near the small ball that fits into the socket of the head where they are attached.

The maxillæ (TAB. XXII. fig. *b*) also exhibit an interesting structure in *Athyreus orientalis* which I have not seen in other Lamellicorn insects: the upper lobe terminates in a broad piece, having a sharp point at its angle within the mouth; whilst the lower lobe has two horny processes; the upper one is broadly-truncate and flat, occasionally, as appears from the figures of Klug and Curtis, bidentate, but in the species which I examined scarcely emarginate; the lower lobe is also flat, but its side is furnished with a series of about seven very short thick bristles pressed together, which must evidently be of peculiar use in the act of mastication. The structure of the lower parts of the mouth has been entirely misdescribed by Mr. MacLeay; the mentum (TAB. XXII. fig. *c*), instead of being deeply emarginate, has the middle of its fore margin advanced further than the lateral angles; the scapes, to which the three-jointed labial palpi are attached, are slightly prominent and furnished with short bristles, and the whole of the underside of this organ is densely clothed like the rest of the body with very long bristles.

Other peculiarities of the present genus consist in the very great width of that part of the metasternum which occurs between the two middle feet (TAB. XXII. fig. *d*)*, which are thereby inserted much more widely apart than the hind-feet; the very short abdomen, which causes the hind-feet to appear as if placed almost at the extremity of the body; and the great length of the hind tibiæ and tarsi. The figure given by M. Guérin Méneville of the underside of the body of *Athyreus castaneus*, in the 'Iconographie du Règne Animal,' in order to exhibit these peculiarities, is far from correct, the metasternum being marked both with transverse and longitudinal lateral incisions which do not exist in nature, and which consequently lead to a very incorrect idea of the real structure of the underside of the body.

On comparing these peculiarities of organization with those of *Geotrupes*, the typical genus of the family to which *Athyreus* has been referred, we are bound to admit the correctness of Mr. MacLeay's observation, that this genus is one of its extreme forms. We here find indeed, in common with *Geotrupes*, a porrected upper lip and laterally exposed horny mandibles, but the structure of the maxillæ and mentum is very different; and entomologists need not be reminded that it is to these latter organs especially that they look for the indication of the nature of the food and the consequent variations

* This and the other figures of generic details are derived from *Athyreus orientalis*.

of habit in the animal. In *Geotrupes* especially, the maxillæ are terminated by large membranaceous lobes instead of the horny points with which they are armed in *Athyreus*; and the mandibles in *Geotrupes* are represented by Mr. Curtis in his 'British Entomology,' pl. 266, as destitute of the flat molar plate which I have noticed in *Athyreus*.

Our knowledge of the habits of the species of *Athyreus* is however too slight to enable us to determine the amount of influence which these forms have upon their modes of life; Lacordaire and Von Martius, our two authorities on the habits of the insects of Brazil, stating but little relative to the *Athyrei*.

M. Lacordaire (Mémoire sur les habitudes des Coléoptères de l'Amérique Méridionale, p. 81; Ann. Sci. Nat. tom. xx.) observes of *Odontæus*, "Les mœurs des deux espèces que j'ai observées, *O. globosus* et *rotundatus*, Dej., sont absolument semblables à celles des *Copris*. On les trouve comme eux dans les bouses, et ils s'enfoncent profondément dans la terre;" adding, "Les *Athyreus*, que Mr. MacLeay a séparés de ce genre et dont j'ai rapporté deux espèces, *A. furcicollis* et *foveicollis*, Dej., n'en diffèrent en rien sous le même rapport. Ces insectes ne paraissent pas communs au Brésil." Dr. Perty observes on the habits of these and other allied genera, "*Hyboson* in Brasiliâ Bonariâque præsertim in stercore humano degunt, sulcos imprimunt sese tamen non infodiunt, sæpissimè et præsertim interdum volitant. Mores *Odontæi globosi* et *rotundati* Dej. *Copridum* simillimi sunt. *Athyrei* quos cl. MacLeay ab *Odontæis* (*Bolboceris*, Kirby) separavit quoad mores nullo modo recedunt. Species generum duorum præcedentium in Brasiliâ rariores, in Bonariâ nondum inventæ (*Odontæi* species plures in graminibus et ligno putrido mensibus Septembri et Januario inveniebantur). Vespere velocissimè volitant.—*Acanthocerus æneus*? MacL. mense Majo in floribus degit: *A. MacLeayi*, Perty, totum per annum in ligno putrido reperitur." (De Insectorum in Americâ Meridionali habitantium vitæ genere, &c. Monachii 1833, fol. p. 10.)

From these remarks we perceive that the relationship of *Athyreus* with *Copris* depends not only on the general form of the body and the position of the feet (to which may be added the resemblance of the radiated head arising from the strong notches of the outer margins of the exposed mandibles of some *Athyrei*), but also on the similarity of habits, that is, so far as depend-

ence may be placed on M. Lacordaire's short statement. It is proper however not to overlook the evident resemblance which exists between the structure of the maxillæ and mentum, &c. of *Athyreus* and that of several genera amongst the aberrant *Trogidæ*, of which I have published an ample analysis in the fourth volume of the 'Transactions of the Entomological Society;' in fact, so strong does this relation appear to me, that I have but little doubt that ultimately it will be found that the true relation of *Athyreus* is towards these aberrant *Trogidæ*.

A few words are necessary with reference to those external characters in these insects which are to be considered as indicating the distinction of sex, and which, as in many of the Lamellicorn beetles, consist in tubercular or horny processes of the prothorax and head in the males, which are either obliterated or but very slightly developed in the opposite sex. It is to be regretted however that we possess very few positive indications in this matter, and even here we find such a want of uniformity in the characters assigned to the distinction of sex in a few of the larger species, and such an apparent want of external sexual distinctions in some of the smaller species, that we are not yet able to speak with confidence on the subject, which is rendered still more difficult by the great rarity of the larger species.

In some of the larger species the head of the male is elongated in front, the occiput terminating conically in a more or less elevated horn, the point of which extends over the labrum, and sometimes even reaches to a short distance in front of the head. The underside of this horn or tubercle is strictly formed of the clypeus. In the species which Dr. Klug has figured as *Ath. bifurcatus*, the conical clypeus reaches to the front of the labrum, terminating in a slightly-raised tubercle; the mandibles are very large and broad, extending beyond this point. The front of the prothorax is very retuse, and is furnished with two somewhat triangular tubercular processes of moderate size. The female of this species (which Dr. Burmeister has sent to Mr. Hope under the name of *Ath. furcicollis*) has the head quite differently formed; the occiput terminates in a transverse raised suture just in front of the insertion of the antennæ, having its lateral angles and middle elevated into three small conical tubercles; beyond this appears the quadrate clypeus, the short labrum, and the smaller mandibles. (It is to be regretted that Dr. Klug has

not represented the mandibles of both sexes in magnified figures, as they are so much unlike each other in both male and female.) The front of the prothorax in this sex is also armed with two small conical tubercles.

The insect figured by Dr. Klug under the name of *A. tridens* of Castelnau (but which appears to me to answer to Mr. MacLeay's description of *A. tridentatus*) has the front of the occiput produced into a long conical elevated horn extending beyond the mandibles, and the middle of the prothorax has a large erect horn, hollowed in front, each of its oblique sides having a small supplemental tubercle. The head of the female of this species, which is contained in Mr. Hope's collection under the name *A. Laportei*, has the occiput terminated transversely, just in front of the insertion of the antennæ, with three elevated points, one at each anterior angle and one in the middle.

The males of *A. wneus* and *A. cyanescens*, figured by Dr. Klug, have the head similarly produced into a long conical elevated horn, the front of the prothorax very concave, the sides of the concavity beyond the middle raised into two broad truncated elevated plates, each of which in the latter species is armed in front with an erect horn; but the outline figures which Dr. Klug has given as representing the head and prothorax of the female of this species, exhibit the occiput angularly produced and extended as far as the front of the labrum (just as in the male of *A. bifurcatus*), whilst the prothorax is represented as exhibiting the characters of the other sex partially developed. If Dr. Klug be correct in giving this as a female insect, we find that the form of the head offers no certain indication of sex. I should however be rather inclined to suspect that this supposed female is a male with the external characters of sex but partially developed, a circumstance of very common occurrence in the cornuted Lamellicorns.

With such considerations, I have but little hesitation in giving the insects subsequently described under the names of *A. gigas*, *A. armatus*, and *A. tuberculatus* as males, although the last-named insect has been considered to be a female, and *A. subarmatus*, *A. Bilbergii* and *A. rotundus* as females, although the two former have the prothorax as strongly marked as some male insects. If there be this difficulty among the larger insects, it is much greater with the individuals of the small species, since some of these, which from the armature of the prothorax must be males, have the occiput terminated trans-

versely; and in others, the specific instead of the sexual character seems to be found in the straightness or angulated form of the occiput, and this is especially the case with the smallest and commonest of the Brazilian species.

With the exception of one or two Indian and African species, the greater portion of the *Athyrei* are natives of Brazil, Guiana, Columbia, Cuba, Mexico, and other parts of Tropical and South America.

Mr. MacLeay's three species, *A. bifurcatus*, *A. tridentatus*, and *A. bidentatus* (*op. cit.* p. 124), inhabit Brazil; *A. ferrugineus*, Pal. Beauv. *Ins. Afr. et Amer.* p. 90 col. tab. ii. 6. fig. 3, is from South Carolina; *A. Bilbergii*, Gray in *Griff. An. Kingd.*, from Demerara; *A. xanthomelas* and *A. hirtus*, Wiedemann (*Zool. Mag.* ii. St. 1. p. 7 & p. 9), from Java; *A. herculeanus* and *A. vicinus*, Laporte, from Brazil; *A. bifurcatus*, Lap., from Paraguay; *A. furcifer* and *A. Juvencus*, Dej. *Cat.*, from Cayenne; *A. furcicollis*, Dej. *Cat.*, from Brazil; and *A. subfurcatus*, Chevrolat in *Dej. Cat.*, from Mexico.

In addition to the preceding species, Dr. Klug has published descriptions of the following: *Athyreus bifurcatus* [MacLeay? the female of which is *A. furcicollis*, Dej.], from Brazil; *A. tridens*, Lap. [*A. tridentatus*, MacLeay? & *A. Laportei* in *Mus. Hope*], from Brazil; *A. tridentatus*, MacLeay [?] (*A. foveicollis*, Dej. *Cat.*, and *A. castaneus*, Guérin, *Iconogr.*), from Brazil; *A. trituberculatus*, Klug, from Brazil; *A. excavatus*, Klug, from British Guiana; *A. lanuginosus*, Klug, from Columbia; *A. angulatus*, Klug, from Cuba; *A. Mexicanus*, Klug, from Mexico; *A. bicolor*, Laporte, from Brazil; *A. cyanescens*, Klug, from Brazil; *A. æneus*, Klug, from Brazil; *A. Corinthius*, Klug, from Brazil; *A. anthracinus*, Klug, from Bahia; *A. violaceus*, Klug, from Brazil; *A. orientalis*, Lap., from Bengal; *A. Kordofanus*, Klug, from Kordofan; and *A. porcatus*, Lap., from Senegal.

In addition to the preceding species, I now beg leave to offer to the Linnean Society descriptions and figures of a number of new and remarkable insects belonging to the same genus, the greater portion of which have been kindly placed in my hands for description by the Rev. F. W. Hope, in whose collection they are preserved.

1. *ATHYREUS GIGAS*, Hope (TAB. XXII. fig. 1); castaneus, elytris magis rufis, capite glabro anticè 3-cornuto, mandibulis magnis externè acutè dentatis, pronoto utrinque

excavatione profundâ discoque cornubus duobus crassis acutis divergentibus, elytris tenuissimè striato-punctatis.—Long. corp. unc. 1 (mandibulis inclusis).

Hab. In Brasiliâ. *In Mus. D. Hope.*

Caput magnum, porrectum, suprâ nitidum, læve, angulis lateralibus ante oculos acutis, verticeque cornubus tribus anticè armato intermedio majori; inter oculos tubercula 2 minima distinguuntur; mandibulis magnis, porrectis, suprâ concavis, apice acuto curvato denteque parvo sub basin posito, margine externo dentibus tribus etiam armato dente antico majori acuto; antennæ clavâ luteâ. Prothorax subpentagonus, anticè et ad latera valdè deflexus, obscurè castaneus, regione dorsali sub lente tuberculis minimis instructâ luteoque setosâ; margine antico valdè sinuato et in medio elevato; utrinque excavatione profundâ nitidâ laterali circulari cornubusque duobus magnis acutis elevatis et divergentibus in medio disci positis; lateribus subangulato-dilatatis, luteo-setosis; pone cornua lineâ dorsali tenui impressâ in carinas duas minutas subobliquas desinente. Elytra rufo-castanea, prothorace angustiora, sub lente tuberculis minimis nigris obsita, præsertim ante medium, striis circiter 7 in singuli elytri disco lævibus relictis, ad latera haud striata; tuberculis humeralibus et subapicalibus ordinariis elevatis nitidis. Corpus subtùs concolor, luteo valdè setosum. Pedes longi; tibiæ anticæ 6-dentatæ.

Fig. 1 a. Prothorax et caput a latere visa.

2. *ATHYREUS ARMATUS*, *Hope* (TAB. XXII. fig. 2); piceo-niger, prothoracis lateribus mandibulis pedibusque rufescentibus, mandibulis magnis singulâ extùs 2-dentatâ dente antico magno, pronoto utrinque carinâ deflexâ medioque cornu suberecto, elytris elevato-striatis.—Long. corp. lin. 9.

Hab. In Americâ meridionali. *In Mus. D. Hope.*

Caput magnum, punctatum, vertice anticè angulato, tuberculo parvo in medio marginis antici angulisque posticis subtuberculatis; angulis lateralibus ante oculos acutis; mandibulæ magnæ, porrectæ, apice parvo acuto curvato denteque parvo sub apice mandibulæ dextræ, singulâ externè dentibus duobus elevatis planis instructâ, dente antico magno, subacuto, porrecto. Prothorax lateribus subdilatis et parum angulatis; utrinque excavatione profundâ nitidâ ovali, suprâ carinâ magnâ deflexâ cinctâ; cornu suberecto versus disci medium anticè posticèque excavato, lineâ tenui impressâ a cornu ferè ad marginem posticum extensâ, pronoti parte posticâ tuberculis minutis elevatis granulatâ, setisque brevibus obscuris instructâ. Elytra subopaca, tuberculis minutis setiferis granulata, striis longitudinalibus 7 lævibus inter humeros et suturam relictis. Pedes piceo-rufi; tibiæ anticæ extùs 5-dentatæ. Corpus subtùs piceo-rufum, setis fulvis obsitum.

Fig. 2 a. Caput et prothorax a latere visa.

3. *ATHYREUS SUBARMATUS* ♀ (TAB. XXII. fig. 3); suprâ obscurus nigricans, labro mandibulis prothoracis lateribus pedibusque piceo-rufis tenuissimè granulosis, clypeo margine antico parùm reflexo posticè carinâ elevatâ in medio tuberculo instructo, antennis luteis, pronoto carinis duabus brevibus mediis in spatio medio ovali lineâ elevatâ circumcincto instructo.—Long. corp. lin. $8\frac{1}{2}$.

Hab. In Americâ meridionali. *In Mus. D. Hope*, sub nomine *A. armatus* ♀.

Corpus suprâ obscurum, sub lente tuberculis minutissimis undique obsitum. Caput mediocre; clypeo margine antico recto parùm elevato, margine postico magis elevato subcarinato tuberculo medio instructo, angulis anticis ante oculos acutis; mandibulæ mediocres subconcaevæ, singulâ incisione angulatâ in marginis externi medio, dextrâ extûs apice magis angulato-porrectâ. Prothorax anticè valdè emarginatus; disco lineis duabus elevatis brevibus medianis posticè parùm convergentibus lineâque elevatâ continuâ spatium ovale includente posticè apertâ; lateribus excavatione parvâ rotundâ versus angulos posticos instructis. Elytra striis septem elevatis lævibus inter humeros et suturam, lateribus apicibusque obscuris. Pedes castanei; tibiæ anticæ dentibus 4 vel 5 obtusis armatæ.

Fig. 3 a. Caput et prothorax a latere visa.

4. *ATHYREUS TUBERCULATUS*, *Hope* (TAB. XXII. fig. 4); obscurè piceus, sub lente tenuissimè granulosis et setosus, antennis luteis, clypeo conico anticè in cornu parùm elevato desinente, pronoto tuberculis duobus contiguis ante disci medium positus, elytris sublineatis, tibiis anticis 5-6-dentatis.—Long. corp. lin. $8\frac{1}{2}$.

Hab. In Brasiliâ. *In Mus. D. Hope*.

Corpus suprâ opacum, undique sub lente tuberculis minimis granulosis. Caput mediocre. Clypeus margine antico deflexo truncato, disco magis elevato conico, tuberculo parvo antico in carinam parvam posticè extenso; angulis lateralibus ante oculos acutis. Mandibulæ mediocres; suprâ subconcaevæ, singula extûs ante apicem subtruncatum incisione angulatâ instructa. Prothorax lateribus et anticè declivis; tuberculis duobus nitidis approximatis ante disci medium positus; lateribus impressione parvâ versus angulos posticos. Elytra lineis longitudinalibus tenuibus elevatis circiter 7 (in singulo), lateralibus versus basin oblitteratis. Corpus infrâ cum pedibus rufo-piceum, tibiæ anticæ extûs 5-6-dentatæ, dentibus posticis 1 vel 2 suboblitteratis.

Fig. 4 a. Caput et prothorax a latere visa.

To this insect is attached a label indicating it to be a female, probably from the small development of the armature of the prothorax. It agrees, in fact, with Dr. Klug's sketch of the female of *A. cyanescens*; but I apprehend

that it as well as Dr. Klug's supposed female are males, with the external sexual characters only slightly developed.

5. *ATHYREUS ROTUNDUS*, Hope (TAB. XXII. fig. 5); suprâ obscurus piceo-rufus, sub lente undique tuberculis minimis obsitus, clypeo margine antico truncato et parùm elevato; margine postico carinâ tuberculis tribus acutis instructo, pronoto tuberculis duobus contiguis ante medium elytrisque læviter striatis.—Long. corp. lin. 10.

Hab. In Brasiliâ. *In Mus. D. Hope.*

Corpus suprâ opacum, piceo-rufum; antennæ luteæ. Caput carinâ elevatâ ad basin clypei tuberculis tribus acutis, intermedio majori; mandibulæ sat parvæ, margine externo pone medium incisione angulatâ instructæ. Anguli laterales ante oculos acuti. Pronotum setis brevissimis indutum, utrinque excavatione parvâ rotundâ versus angulos laterales lineâque brevi tenuissimâ politâ prope marginem posticum humeris elytrorum oppositâ. Elytra striis 7 lævibus tenuibus elevatis longitudinalibus inter humeros et suturam instructa, lateralibus versus basin minùs conspicuis. Pedes magis castanei; tibiæ anticæ dentibus 5 acutis extùs armatæ.

Fig. 5 a. Caput et prothorax a latere visa.

This insect appears to me to be probably the female of *A. tuberculatus*.

6. *ATHYREUS BELLATOR* (TAB. XXII. fig. 6); piceo-niger, capite et pronoto (marginibus exceptis) sublævibus; hujus marginibus lateralibus pedibusque rufis vel fulvis, clypeo in dentem acutum elongato, pronoto dente elevato bifido pone medium armato.—Long. corp. lin. 10½.

Athyreus bifurcatus, Laporte, *An. Art.* iii. p. 102. pl. 7. f. 3. (*nec A. bifurcatus, Klug, nec A. bifurcatus, MacL.*)

Athyreus furcifer, Dej. *Cat. et Laporte, An. Art.* l. c. (*teste Mus. Gory.*)

Hab. In Brasiliâ et Cayennâ. *In Mus. D. Hope.*

Corpus suprâ magis læve quam in præcedentibus. Caput porrectum; clypeo in spinam os obtegens suprâ carinatam elongato, angulis lateralibus ante oculos acutis; vertex concavus; mandibulæ margine externo pone medium angulariter inciso, et pone incisionem truncato; antennæ luteæ. Pronotum anticè subretusum, spinâ elongatâ erectâ apice bifidâ pone disci medium armatum, impressionibus duabus ovalibus versus angulos posticos lineâque tenui abbreviatâ elevatâ lævi utrinque versus marginem posticum humeris elytrorum oppositâ. Elytra sub lente tenuissime scabra et setosa, striis 7 longitudinalibus distinctis elevatis at angustis inter humeros et suturam instructa. Pedes castaneo-fulvi; tibiæ anticè spinis 5 acutis nigris armatæ.

Variat dentibus spinæ thoracis plus minusve elongatis et divergentibus.

Fig. 6 a. Caput et prothorax a latere visa.

Obs. The description given by MacLeay of his *A. bifurcatus* agrees with neither Klug's nor Laporte's species so named.

The present species stands in Mr. Hope's collection as the male of *A. Bilbergii*.

7. *ATHYREUS BILBERGII*, Gray in Griffith *An. Kingd.* (TAB. XXII. fig. 7); piceo-niger, tuberculis minutis scaber, clypei margine antico recto postico carinato et 3-tuberculato tuberculo intermedio magis elevato, capitis angulis lateralibus ante oculos acutis, pronoto margine antico parùm elevato; disco tuberculis duobus lævibus lineisque duabus curvatis elevatis.—Long. corp. lin. 10.

Athyreus furcicollis, Dej. (teste Mus. Gory, nunc Hope.)

Hab. In Demerarâ et Cayennâ. In Mus. D. Hope.

Individuum typicum, cujus figuram in *op. cit.* delineavi, hic describo. Corpus suprâ saturatè piceo-nigrum, tuberculis parvis glabrum; prothoracis lateribus magis piceis; pedibus parùm castaneis; antennis luteis. Caput suprâ subconcauum, margine tenui elevato. Pronotum lateribus tuberculis minùs numerosis at magis distinctis, tuberculis duobus glabris in disci medio subconnexis lineâ vix impressâ et ad marginem posticum pronoti extensâ divisâ; utrinque lineâ tenui elevatâ parùm sinuatâ, posticè convergenti, ante marginem anticum et posticum abbreviatâ; impressione parvâ ovali versùs angulos prothoracis laterales lineisque duabus parvis glabris obliquis versus marginem posticum humeris elytrorum oppositis. Elytra striis 7 tenuibus parùm elevatis instructa; scutellum suturaque elytrorum setis fulvis obsita. Tibiæ anticæ dentibus 5 armatæ, dentibus anticis magnis et acutis.

8. *ATHYREUS PHOLAS*, Buquet MS. (TAB. XXII. fig. 8); piceo-castaneus, prothoracis elytrorumque lateribus pedibusque rufescentibus, scabriusculus, clypeo anticè angustato margine antico bituberculato, vertice concavo, prothoracis lateribus dilatatis disco excavatione subquadratâ spinâ erectâ anticâ lateribusque acutè tuberculatis.—Long. corp. lin. 6.

Athyreus trituberculatus, Gory in Mus.

Hab. In Columbiâ, Santa Fè de Bogota. In Mus. D. Hope.

Caput suprâ parùm concavum, scabrum, marginibus clypei paullò elevatis et convergentibus, apice angustiori et bituberculato; mandibulæ mediocres, lateribus pone medium incisâ; antennæ luteo-fulvæ. Pronotum lateribus dilatatis, margine postico valdè sinuato, disco excavatione magnâ subquadratâ glabrâ cujus margo anticus spinâ erectâ armatus, lateribus anticè in tubercula duo conica elevatis; margine postico semicirculari lineâ tenui lævi circumcincto, quæ in discum paullò utrinque extenditur; lateribus

versus angulos impressis. Elytra subscabra setosa, striâ suturali alterisque nonnullis vix ultra basin extensis. Pedes castaneo-fulvi; tibiæ anticæ extûs 5-dentatæ.

Fig. 8 a. Caput et prothorax a latere visa.

9. *ATHYREUS PURPUREIPENNIS* (TAB. XXII. fig. 12); cyaneo-niger subtûs fulvo-testaceus, elytris lætè purpureis, pronoto lineâ longitudinali impressâ, utrinque spatio convexo lævissimo nigro versus angulos anticos furcato.—Long. corp. lin. 6.

Hab. In Americâ meridionali. *In Museo Britannico.*

Cyaneo-niger, subtûs fulvo-testaceus luteo-setosus, metasterno castaneo, elytris lætè purpureis. Caput punctatum vertice in angulum supra clypeum producto, mandibulæ extûs profundè sinuatæ, antennæ clava fusca, articulis basalibus, labro palpis pedibusque luteo-testaceis. Pronotum magnum, elytris parûm latius, lateribus subserrulatis, punctatum scabriusculum lineâ longitudinali impressum, utrinque spatio convexo lævissimo nigro, versûs angulos anticos pronoti, furcato, furcæ divisione externâ longiori et ad marginem lateralem extensâ, margine antico tuberculo parvo conico, lateribus in medio etiam impressione rotundatâ et utrinque inter hanc et scutellum lineâ obliquâ parûm elevatâ glabrâ. Elytra punctata, tuberculo lævi humerali, spatio irregulari inter suturam et striam primam juxta suturam. Tibiæ anticæ extûs 4-dentatæ.

Fig. 12 a. Caput et pronotum a latere visa.

10. *ATHYREUS CENTRALIS* (TAB. XXII. fig. 13); testaceo-fulvus, capitis vertice anticè 3-dentato, pronoto carinâ abbreviatâ centrali lineis duabus parûm elevatis obliquis alterâque utrinque prope angulos posticos, elytris impresso-striatis striis longe ante apicem evanescentibus.—Long. corp. lin. 6½.

Hab. In Novâ Granatâ, Rio Magdalena, Ibaque. *In Museo Britannico.*

Testaceo-fulvus subtûs pallidior, luteo-setosus, capite punctato, spatio verticali subconcavo et ferè lævi, anticè tridentato. Mandibulæ extûs profundè sinuatæ. Pronotum latum; lateribus obtusè angulatis, angulis posticis subemarginatis. Dorsum tenuissimè granulatum, carinâ tenui abbreviatâ centrali longitudinali, lineis duabus parûm elevatis lævibus obliquis ferè ad marginem posticum extensis, alterâque utrinque minori versus angulos posticos, punctoque intra angulum lateralem utrinque impresso. Elytra tenuissimè punctata, impresso-striata, striis longe ante apicem evanescentibus. Tibiæ anticæ extûs 5-dentatæ.

Fig. 13 a. Caput et prothorax a latere visa.

11. *ATHYREUS TWEEDYANUS* (TAB. XXII. fig. 14); testaceus, pronoto maximo lateribus obtusè angulatis et sinuatis, medio disci depresso lævi et lineâ obliquâ parûm curvatâ e lateribus separato lineâque alterâ abbreviatâ utrinque versus angulos posticos.—Long. corp. lin. 5¾.

Hab. In Insulâ Hayti, Indiæ occidentalis. DD. Tweedy et Hearne. In *Muss. Soc. Ent. Londin. et Hope.*

Punctatissimus et setosus. Caput mediocre, vertice parùm concavo, carinâ tenuissimâ transversâ e clypeo separato. Clypeus transversus, brevis, angulis anticis rotundatis, medio in angulum parvum producto. Mandibulæ extûs sinuatæ. Pronotum maximum, lateribus angularibus, angulis posticis obtusis, anticè valdè declive, tuberculo parvo conico elevato in medio juxta marginem anticum; carinæ duæ obliquæ curvatæ ferè ad marginem posticum extensæ, spatio interjecto lævi concavo lineâ profundiori mediâ ad scutellum ductâ, lineâ alterâ breviori obliquâ utrinque angulis humeralibus elytrorum oppositâ; impressione rotundatâ juxta angulos laterales pronoti. Elytra brevia, semicircularia, tenuissimè punctata striisque impressis præsertim ad basin instructis; humeris elevatis striâque suturali magis distinctâ. Tibiæ anticæ extûs 7-dentatæ.

Fig. 14 a. Caput et pronotum a latere visa.

From the very incomplete manner in which the Count De Castelnau described many of the insects in M. Gory's collection, I have thought it useful to add figures of the head and thorax of the three following species described by him, from the type specimens now in Mr. Hope's collection.

ATHYREUS EXCAVATUS, *Laporte, An. Art. ii. p. 103 (Juvencus, Dej.).* Cayenne.

TAB. XXII. fig. 9. Caput et pronotum supra visa.

ATHYREUS BICOLOR, *Laporte, An. Art. ii. p. 103.* New Grenada.

TAB. XXII. fig. 10. Caput et pronotum supra visa.

ATHYREUS 6-DENTATUS, *Laporte, An. Art. ii. p. 103.* Paraguay.

TAB. XXII. fig. 11. Caput et pronotum supra visa.

OBS. *Athyreus recticornis*, Guérin, *Iconogr. du Règne An. Ins. p. 83*, from Swan River (*Mus. Gory*), is identical with *Bolboceras hastifer*, Bainbridge.

OBS. The insect placed in M. Gory's collection, with the label of *Athyreus porcatus*, De Laporte, *Anim. Artic. t. ii. p. 103. no. 6*, (*Athyreus Senegalensis*, Dejean,) is a new species of *Bolboceras*, from Senegal.

Species added subsequent to the reading of the Paper.

12. ATHYREUS FOSSULATUS (TAB. XXII. fig. 15); piceo-niger minutissime granulatus, capitis disco plano margine antico in cornu acutum super clypeum porrecto angulis lateralibus acutis, pronoto fossulâ mediâ profundâ lævi lateribusque granulatis; parte fossulatâ carinis duabus elevatis angustis glâbris posticè parum incurvis marginatâ;

marginibus lateralibus integris, elytris minutè longitudinaliter granulatis; singulo sub lente striis tribus longitudinalibus angustissimis impresso.—Long. corp. lin. 5.

Hab. In Brasiliâ, apud Pernambuco. *In Mus. D. Reichii, Parisiis.*

Fig. 15 a. Caput et pronotum a latere visa.

This species appears to approach near to *A. bicolor*, Klug. It is entirely covered with very minute granulations, those of the elytra being elongated and almost confluent. It is black, with a pitchy tinge at the sides, and is clothed beneath with pale brown hairs. The disc of the head is neither impressed nor tuberculated; the angles in front of the eyes are very acute, and the front of the disc is produced into an acute and porrected conical point, the anterior angles in front of the antennæ being also acute; the mandibles have a strong notch at the sides, the margin of each division formed by the notch being rounded. The middle of the pronotum is deeply excavated, the excavation being somewhat oval; its deepest part is smooth, but the sides are granulated; the sides of the excavation are edged with a narrow raised polished carina on each side, which converge towards each other behind, and are rather angulated outwardly near the middle: there is no oblique, polished, thin raised line between each of these two polished edges and the hinder angle of the pronotum, the lateral margin of which is entire, having a small impression on each side near the margin. The elytra are but slightly setose, the shoulders and a spot near the apex of each are polished, and each is marked (when seen through a lens) with a very slender raised line close to the suture, and two others impressed on the disc, which are more distinctly visible at the base. The underside of the body and legs is pitchy, thickly clothed with pale yellowish brown hairs.

13. *ATHYREUS REICHII* (TAB. XXII. fig. 16); piceo-castaneus, lateribus prothoracis marginibus lateralibus elytrorum antennis pedibusque fulvis, capitis margine antico in angulum acutum supra clypeum producto; disco excavatione rotundâ inter oculos, pronoti angulis posticis prominentibus; tuberculo ovali ante medium carinis duabus obliquis lateralibus lineisque duabus lævibus ante angulos posticos, elytris substriatis.—Long. corp. lin. $4\frac{1}{2}$.

Hab. In Novâ Granatâ. *In Mus. D. Reichii, Parisiis.*

Fig. 16 a. Caput et pronotum a latere visa.

This species is at once distinguished from all the allied smaller species

of the genus by the raised tubercle on the front part of the pronotum being placed towards the middle, instead of close to the anterior margin. The upper side is pitchy chestnut, with the front of the head broad, the margin of the prothorax and narrow edges of the elytra fulvous red; the underside of the body and legs are also fulvous red, with fulvous hairs. The head is covered with very fine tubercles, having the front margin nearly semicircular, the centre produced into an angle advanced over the clypeus, and the two anterior angles in front of the antennæ are scarcely prominent. Between the eyes is a rounded polished excavation. The prothorax is also covered with very minute tubercles; and at a little distance in front of the centre is a raised oval tubercle, from which extends a slightly-impressed longitudinal line reaching to the scutellum; from this line the sides are slightly raised, the raised part on each side being bounded by an oblique, slender, raised and polished line, from which, near the base, extends inwardly a small transverse and not very distinct spur. Between this line and the hinder angle is another much shorter and more oblique raised shining line, and towards the lateral margin, opposite to the notch above the base of the fore-legs, is a small circular excavated spot. The elytra are finely rugose and setose, substriated, the striæ being deeper towards the base of the elytra, and almost vanishing before reaching the apex. The fore tibiæ have five obtuse teeth.

EXPLANATION OF TAB. XXII.

- Fig. 1. *Athyreus gigas*, Hope, MS. 1 a. Head and thorax of ditto, detached.
 2. ——— *armatus*, Hope, MS. 2 a. Head and thorax, detached.
 3. ——— *subarmatus* ♀, Westwood. 3 a. Head and thorax, detached.
 4. ——— *tuberculatus*, Hope, MS. 4 a. Head and thorax, detached.
 5. ——— *rotundus*, Hope, MS. 5 a. Head and thorax, detached.
 . ——— *bellator*, Westwood. 6 a. Head and thorax, detached.
 7. ——— *Bilbergii*, Gray. (Head and thorax, seen from above.)
 8. ——— *Pholas*, Buquet, MS. 8 a. Head and thorax, detached.
 9. ——— *excavatus*, Laporte. (Head and thorax, seen from above.)
 10. ——— *bicolor*, Laporte. (Head and thorax, seen from above.)
 11. ——— *sexdentatus*, Laporte. (Head and thorax, seen from above.)

- Fig. 12. *Athyreus purpureipennis*, Westwood. 12 a. Head and thorax, detached.
13. ——— *centralis*, Westwood. 13 a. Head and thorax, detached.
14. ——— *Tweedyanus*, Westwood. 14 a. Head and thorax, detached.
15. ——— *fossulatus*, Westwood. 15 a. Head and thorax, detached.
16. ——— *Reichii*, Westwood. 16 a. Head and thorax, detached.

a, b, c, d. Details of *Athyreus orientalis*.

- a. Mandibles. b. Maxilla. c. Mentum, labium and labial palpi. d. Metasternum and basal portion of the middle and hind legs.

